



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/004,084	10/23/2001	Veijo V. Vanttinen	442-010623-US(PAR)	9396
7590	01/25/2005		EXAMINER	
Perman & Green 425 Post Road Fairfield, CT 06430-6232			PATEL, JAY P	
			ART UNIT	PAPER NUMBER
			2666	

DATE MAILED: 01/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application N .

10/004,084

Applicant(s)

VANTTINEN ET AL.

Examiner

Jay P. Patel

Art Unit

2666

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE \_\_\_\_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on 23 October 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10/23/2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

**DETAILED ACTION**

***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

2. Claim 11 is rejected under 35 U.S.C. 112, 2<sup>nd</sup> paragraph, as having lack of antecedent basis. Claim 11 recites the limitation "Lb interface" in line 17, page 24. There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-10, 12-15, and 18-19 are rejected under 35 U.S.C. 102(e) as being anticipated by Silver et al. (U.S. Patent 6560457 B1).
5. In regards to claim 1, Silver anticipates a base station controller, which uses both circuit-switched and packet-switched messages in positioning the subscriber terminal (column 8, lines 23-37 and figure 4). In regards to the location of a mobile station within the packet-switched network (column 4, lines 40-44), a sequence of messages is initiated between the circuit-switched network (column 4, lines 24-30) and the packet-

switched network. Furthermore, a tunneled message is forwarded to the base station system BSS, which includes a base station controller (column 8, lines 31-34).

Furthermore, since both circuit-switched and packet-switched networks are involved, it is inherent that both types of messaging are involved in the location determination of the mobile terminal (Please refer to figure 2 in Silver for a block diagram of the system components of the circuit-switched and packet-switched networks).

6. In regards to claim 2, it is inherent that the positioning of the mobile station relates to a location request. Therefore, the relevant disclosure used with regards to claim 1 is also applicable to claim 2.

7. In regards to claim 3, it is inherent that the process of locating the mobile station disclosed by Silver is in regards to a subscriber terminal since one would have to subscribe to a mobile service in order to use the mobile terminal within the networks. Therefore, the relevant disclosure used with regards to claim 1 is also applicable to claim 3.

8. In regards to claim 4, Silver discloses that the circuit-switched network includes functional objects such as a home locations register (HLR) and a visitor location register (VLR) (column 4 lines 23-39). Since the location centers (either HLR or VLR) are part of the circuit-switched network, it is inherent that the connection between the base station controller and the switching center is circuit-switched and the other connections (i.e. the packet-switched connections) would be packet-switched connections.

9. In regards to claim 5, it is inherent from Silver that a message is transmitted in a packet-switched format to establish a circuit-switched connection. Silver discloses that

a tunneled message is forwarded to the base station system BSS, which includes a base station controller (column 8, lines 31-34). Furthermore, the packet-switched network transmits the message bearing location information data to the circuit-switched network. Furthermore, it is well known in the art that a message in a packet format has a packet identifier.

10. In regards to claim 6, since the sequences of messages in regards to the locations of the mobile station are transmitted between the circuit and packet-switched networks, it is inherent that a correlation exists between the two types of messages. Therefore, the relevant disclosure used in regards to claim 5 is also relevant to claim 6.

11. In regards to claims 7 and 8, since the sequences of messages in regards to the locations of the mobile station are transmitted between the circuit and packet-switched networks, it is inherent that the forwarding mechanism also involves converting messages from one type to another (column 4 lines 23-39).

12. In regards to claim 9, Silver discloses that the packet-switched network includes functional objects typical of those envisioned for the GPRS data transmission network (column 4 lines 40-44). Therefore, it is inherent that the packet-switched functionality comprises a packet-switched protocol.

13. In regards to claim 10, Silver discloses that the circuit-switched network includes functional objects typical of ANSI systems (column 4 lines 24-25). Therefore, it is inherent that the circuit-switched functionality comprises a circuit-switched protocol.

14. With regards to claim 12, Silver anticipates a location unit for determining the position of the mobile station and having a circuit-switched connection between the

location center and the base station controller (column 4 lines 23-39). Silver discloses that the circuit-switched network includes functional objects such as a home locations register (HLR) and a visitor location register (VLR). Since the location centers (either HLR or VLR) are part of the circuit-switched network, it is inherent that the connection between the base station controller and the switching center is circuit-switched.

In further regards to claim 12, Silver also anticipates both circuit-switched and packet-switched functionality for processing circuit-switched and packet-switched messages respectively (column 4 lines 24-25 and column 4 lines 40-44). Silver discloses that the circuit-switched network includes functional objects typical of ANSI systems and that the packet-switched network includes functional objects typical of those envisioned for the GPRS data transmission network.

In further regards to claim 12, Silver also anticipates means for establishing an association between the circuit-switched and the packet-switched messages (column 8 lines 23-39). Since the sequences of messages in regards to the locations of the mobile station are transmitted between the circuit and packet-switched networks, it is inherent that a correlation exists between the two types of messages.

15. With regards to claim 13, Silver discloses that the circuit-switched network includes functional objects typical of ANSI systems (column 4 lines 24-25). Therefore, it is inherent that the circuit-switched functionality comprises a circuit-switched protocol stack.

16. With regards to claim 14, Silver discloses that the packet-switched network includes functional objects typical of those envisioned for the GPRS data transmission

network (column 4 lines 40-44). Therefore, it is inherent that the packet-switched functionality comprises a packet-switched protocol stack.

17. With regards to claim 15, since the sequences of messages in regards to the locations of the mobile station are transmitted between the circuit and packet-switched networks, it is inherent that the forwarding mechanism also involves converting messages from one type to another (column 4 lines 23-39). Furthermore, the SGSN transmits a message to the base station controller in the sequences of messages regarding the location of the mobile station and therefore, the base station controller acts as a gateway between the two networks.

In regards to claim 18, it merely claims a system element which is also claimed in claim 12, therefore all the relevant disclosure with regards to claim 12 is also relevant to claim 18. Silver anticipates circuit-switched functionality for processing circuit-switched messages (column 4 lines 24-25). Silver discloses that the circuit-switched network includes functional objects typical of ANSI systems. Furthermore, since the sequences of messages in regards to the locations of the mobile station are transmitted between the circuit and packet-switched networks, it is inherent that a correlation exists between the two types of messages and therefore, an association is established (column 8 lines 23-39).

18. In regards to claim 19, it merely claims a system element which is also claimed in claim 12, therefore all the relevant disclosure with regards to claim 12 is also relevant to claim 19. Furthermore, silver anticipates a location unit for determining the position of the mobile station and having a circuit-switched connection between the location center

and the base station controller (column 4 lines 23-39). Silver discloses that the circuit-switched network includes functional objects such as a home locations register (HLR) and a visitor location register (VLR). Since the location centers (either HLR or VLR) are part of the circuit-switched network, it is inherent that the connection between the base station controller and the switching center is circuit-switched.

In further regards to claim 19, silver anticipates packet-switched functionality for establishing a packet-switched connection to the core network (column 4 lines 40-56). Silver discloses that the packet-switched network includes functional objects typical of those envisioned for the GPRS data transmission network. Furthermore, since the packet-switched network includes a SGSN, the presence of a core network element. Furthermore, since the sequences of messages in regards to the locations of the mobile station are transmitted between the circuit and packet-switched networks, it is inherent that a correlation exists between the two types of messages and therefore, an association is established (column 8 lines 23-39).

### ***Claim Rejections - 35 USC § 103***

19. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

20. Claims 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Silver et al. (U.S. Patent 6560457 B1) in view of Sugirtharaj (U.S. Patent 6678526 B1).



21. With regards to claim 16, Silver teaches all the limitations of claim 12 as stated above. Silver fails to teach the limitation of having a SS7 protocol in the circuit-switched connection. Sugirtharaj teaches the above-mentioned limitation (column 4, lines 51-62). The connection between the HLR (home location registry) and the service platform is via a SS7 connection. Furthermore, since the circuit-switched network includes functional objects of the ANSI systems, the Lb interface is obvious since an ANSI standard includes the Lb interface. Therefore, it would be obvious to one skilled in the art to incorporate the connection between the base station controller and the location center using a SS7 protocol specified by Sugirtharaj. The proper motivation is supported by both references, which intend to improve service for a mobile terminal for improved access in packet switching as well as circuit-switching networks.

22. Claim 17 is rejected under 35 U.S.C. 103(a) as being obvious over Silver et al. (U.S. Patent 6560457 B1).

23. In regards to claim 17, it is obvious to one skilled in the art that in order for the location center to determine the position of the mobile terminal, a signal must be received from the mobile terminal.

**Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jay P. Patel whose telephone number is (571) 272-3086. The examiner can normally be reached on M-F 9:00 am - 5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Q. Ngo can be reached on (571) 272-3139. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

jpp 1/19/2005  
Jay P. Patel  
Assistant Examiner  
Art Unit 2666

  
RICKY NGO  
PRIMARY EXAMINER